A Cultural Resources Overview of the International Boundary Segment of the Lower Colorado River, Yuma County, Arizona

by Matthew A. Sterner

with contributions by

Matt C. Bischoff
Joseph A. Ezzo
Joshua M. Protas
E. Jane Rosenthal
Joan S. Schneider
Robert M. Wegener
Stephen L. Williams

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CONTENTS

LIST OF FIGURES

LIST OF TABLES

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—Matthew A. Stemer

CHAPTER 1

Introduction

The importance of the lower Colorado River to the development of cultural trends in the southwestern United States cannot be understated, particularly that portion of the river in the vicinity of the present-day city of Yuma. As a focal point of human activity from prehistoric times forward, this area has profoundly impacted the history of Arizona, California, and the Greater Southwest. In prehistoric times, the Colorado River area served as an the lifeblood of the native population, teeming with the resources that sustained life. During later prehistoric times, the Colorado River floodplain was an agricultural "oasis" to the indigenous groups who capitalized on the nutrient-rich soils deposited annually. By the time of the Spanish explorers, the Colorado River represented a major transportation route, a historical theme that subsequently defined the character of the river and its regional importance. In recent times, the flow of the Colorado has been harnessed through a series of dams, allowing the fertile lower Colorado River valley to be transformed into one of the leading agricultural producers in the region.

Project Description

The U.S. Army Corps of Engineers, Los Angeles District (USACE) has contracted with Statistical Research, Inc. (SRI), to prepare a cultural resources overview for a 24-mile (38.4-km) section of the lower Colorado River known as the international boundary segment (Figure 1). This work constitutes a portion of an Environmental Impact Statement (EIS) to be prepared by USACE for the United States Section, International Boundary and Water Commission (IBWC). The EIS will address the impacts in the United States of alternatives for a long-term boundary preservation and carrying capacity improvements project that is currently under consideration by the United States and Mexico for the international boundary segment of the Colorado River.

The current study area encompasses the Colorado River channel and floodway in the United States within the 24-mile international boundary segment, extending from Morelos Dam (T8S R24W, Section 28, USGS Yuma East 7.5-minute quadrangle) to the south end of the Southerly International Boundary (T8S R22W, Section 10, USGS Gadsden 7.5-minute quadrangle). The area of potential effect (APE) for the current undertaking includes the main Colorado River channel, as well as the river floodplain to the levee toe on the U.S. side. For purposes of archival research, an area extending beyond the levee, approximately 2.5–3 miles east of the river, will serve as the study area.

Conducting an archival overview formed only a portion of our responsibilities within the scope proposed for this project. USACE envisioned incorporating geoarchaeological testing in an effort to develop a predictive model for identifying cultural resources in the area that falls between the Colorado River channel levees. This task was accomplished during a week of backhoe trench excavation, the results of which are presented in Chapter 6.

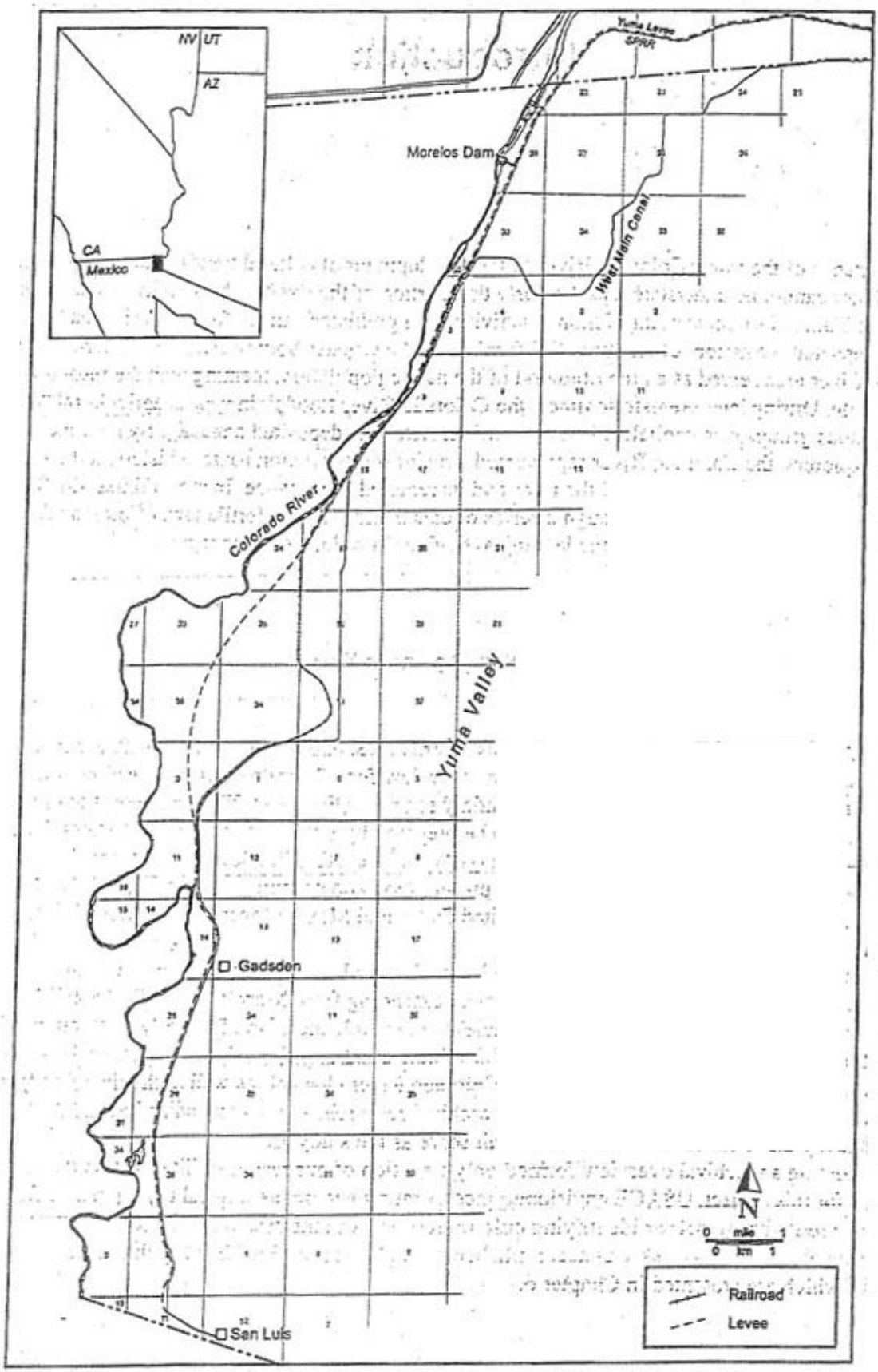

Figure 1. The international boundary segment of the Colorado River.

Objectives of the Overview

The following Class I cultural resources overview is intended to provide USACE and the IBWC with baseline information concerning identified and potential cultural resources within the designated project area. A Class I cultural resources inventory report is primarily restricted to a literature and records search, collating information on previously identified cultural resources within the project area. Although no field investigation of cultural resources is required, it is necessary to contact and/or visit a number of agencies that may contain information germane to the project or the project area. For the current undertaking, these include the Arizona State Museum, Site File Room, Tucson, Arizona; Arizona State University, Anthropology Laboratory, Tempe, Arizona; the Bureau of Land Management, Yuma Area Office, Yuma, Arizona; the Southeast Information Center, Imperial Valley College Desert Museum, Ocotillo, California; the Bureau of Land Management, Desert District Office, Riverside, California; and the Bureau of Reclamation, Lower Colorado Regional Office, Boulder City, Nevada. Although visits to each of the locations mentioned above were not possible, at a minimum, each was consulted regarding cultural resources within the project area.

Report Organization

The following overview for the international boundary segment of the lower Colorado River is presented in seven chapters. Following this brief introduction, Chapter 2 will present an environmental overview of the region, addressing such topics as climate, vegetation, and fauna. Chapters 3 and 4 present the results of the prehistoric and historical-period research, each presenting a chronological overview in addition to research themes for the respective discussions. Following this discussion, we present the results of the site-file investigation, identifying known cultural resources within the APE. Chapter 6 discusses the predictive modeling component of the scope, with separate discussions for the methods, results, and the presentation of the predictive model. Finally, Chapter 7 summarizes the results of the project and presents some management recommendations regarding cultural resources along this section of the river.

CHAPTER 2

Environmental and Cultural Overview

Environmental Setting

The current study area encompasses the Colorado River channel and floodway in the United States in the 24-mile international boundary segment. Morelos Diversion Dam forms the northern end of the APE, which includes the main Colorado River channel and the river floodplain to the levee toe on the U.S. side, with the APE terminating at River Mile 23.7 (River Kilometer 38.2), also defined as the Southerly International Boundary. The area is characterized by alluvial valleys (along the river) with gradual rises to generally barren mesas. Beyond the mesas are low, rugged, serrated mountain ranges. The floodplain is generally wide; the river's terraces are set well back from the Colorado River. During the 1800s, the Colorado River had a highly variable flow, with a fast current during summers and low water levels during winters. High silt content led to fluctuating sand bars that continually frustrated navigation along the river. Today, the flow rate of the river is relatively constant—because of the construction of numerous dams along the length of the river that regulate its flow.

The soils of the lower Colorado River are deposits of sand, silt, and gravel. The soils in the study area are generally considered part of the Gilman-Vint-Brios Association, with soils composed of mixed alluvium and sandy loam, at times more than 5 feet deep. These soils are considered particularly suitable as pasture lands and for irrigated crops (Chamberlin and Richardson 1974:3–4). The climate along the lower Colorado River is classified as hyperthermic (very hot), with an annual precipitation of approximately 3 inches (Swanson and Altschul 1991:18). The meager rainfall limits vegetation to cacti, annual grasses, desert scrub, and creosote (Chamberlin and Richardson 1974:2).

Vegetation along the Colorado River's channel has always been lush. The first land surveyors working in the area during the 1850s reported that the banks of the Colorado River were thick with willow, cottonwood, and mesquite (Pool 1855). By the end of the nineteenth century, the area was overtaken with arrow weed after steamboat crews removed much of the hardwood along the riverbanks (Swanson and Altschul 1991:18). During the twentieth century, the natural environment of the Colorado and Gila River floodplains has been significantly impacted by agricultural development, as exhibited by the construction of dams, irrigation systems, and other systems for flood control. The majority of the study area has been modified in some way for agricultural or habitation purposes. The remaining areas in proximity to the main stem of the Colorado that have not been otherwise modified or impacted by human activity remain riparian. The surrounding mountainous areas are dominated by creosote bush *(Larrea tridentata)*, with less-frequent occurrences of jumping cholla *(Opuntia fulgida)*, prickly pear *(Opuntia polyacantha)*, screwbean mesquite *(Prosopis pubescens)*, honey mesquite *(Prosopis glandulosa)*, and various shrubs, reeds, and grasses.

Fauna in the area consists predominantly of small mammals, such as desert cottontail rabbit *(Sylvilagus audubonii)* and round-tailed ground squirrel. Larger mammals present include coyote *(Canis latrans)*, Sonoran pronghorn antelope *(Antilocapra americana sonorensis)*, and mule deer *(Odocoileus hemionus)*. Typical avifauna indigenous to the region include the red-tailed hawk *(Buteo jamaicensis)*,

Gambel's quail *(Callipepla gambelii)*, and mourning dove *(Zenaida macroura)* (Phillips et al. 1964). The arid climate associated with the Sonoran Desert is particularly conducive to reptiles, with amphibians prolific in riparian zones. The zebra-tailed lizard *(Callisaurus diaconoides)*, desert spiny lizard *(Seeloporus magister)*, and the desert horned lizard *(Phrynosoma platyrhinos)* could all be expected in the area.